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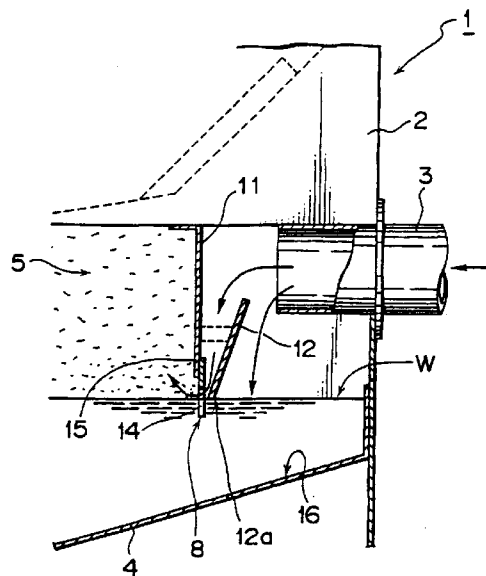
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(54) **Wet dust collecting apparatus**

(57) The wet dust collecting apparatus is capable of efficiently collecting hot fume dust or the like generated when machining with a laser and plasma machine or the like without separately providing a mist generator, and comprises a housing (2); a suction passage (3) leading into the housing for sucking in dust; a water reservoir (4) disposed in the housing (2); a mist chamber (5) which is above the water reservoir (4) and downstream of the suction passage (3); a dust filter (6) which is downstream of the mist chamber (5); a fan (7) for sucking dust from the suction passage (3) through the mist chamber (5) to the filter (6); and a comb-toothed mist generator (8) disposed at a position of communication between the suction passage (3) and the mist chamber (5). The arrangement is such that dust-containing air sucked into the suction passage (3) is directed against the mist generator (8) so as to vibrate the surface of water in the water reservoir (4) at high speed to generate mist in the mist chamber which carries the dust to the dust filter (6).

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EUROPEAN SEARCH REPORT

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| DOCUMENTS CONSIDERED TO BE RELEVANT | | | |
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| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | CLASSIFICATION OF THE APPLICATION (Int.Cl.6) |
| X | US 3 812 658 A (ARNOLD O ET AL) 28 May 1974 * the whole document * | 1-4,6,7 | B01D47/02 |
| X | GB 1 162 143 A (NIKEX NEHEZIPARI KULKERESKEDELMI VALLALAT) 20 August 1969 * the whole document * | 1-4 | |
| Y | US 2 048 145 A (SILLERS) 21 July 1936 * the whole document * | 1-7 | |
| Y | US 5 292 353 A (KAUFMAN ARNOLD S ET AL) 8 March 1994 * column 2, line 61 - column 4, line 36; figures 2-4 * | 1-7 | |
| A | DE 869 937 C (CLARK ET AL.) 9 March 1953 * the whole document * | 1-8 | |
| | | | TECHNICAL FIELDS SEARCHED (Int.Cl.6) |
| | | | B01D |
| The present search report has been drawn up for all claims | | | |
| Place of search BERLIN | | Date of completion of the search 6 February 1997 | Examiner Cubas Alcaraz, J |
| CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document | | T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document | |

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